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SB SAT @ AMSAT $ANS-248.01
CHILEAN MICROSAT STATUS

HR AMSAT NEWS SERVICE BULLETIN 248.01 FROM AMSAT HQ
SILVER SPRING, MD SEPTEMBER 4, 1993
TO ALL RADIO AMATEURS BT
BID: $ANS-248.01

More Information About The Chilean MICROSAT

ANS has received additional clarifying information on CESAR-1 which was the subject of an ANS bulletin released 14-AUG-1993. CESAR-1 is a 100% amateur radio satellite project being constructed by AMSAT-CE. Contrary to other reports, the Chilean Air Force has no participation in it. The MICROSAT type satellite is being built under an agreement between AMSAT-NA and AMSAT-CE under which AMSAT-NA is providing AMSAT-CE with basic information regarding the MICROSAT design, and rendering any possilble assistance when needed. AMSAT-CE estimates the total cost of completing its first satellite project at around $1M US DOLLARS! This amount includes more than merely the cost of building CESAR-1 but represents the total outlay needed to establish the necessary infrastructure to accomplish the task. To appreciate this, one must consider that the newly established Chilean AMSAT group exists in an environment much different than in most countries in which satellites have been built. There are no aerospace companies with employees who are radio amateurs. Therefore AMSAT-CE must set up its own laboratory and machine shop and train people to man them; and parts must procured. All of this requires the mounting of a fund raising campaign to publicize the project within Chile, including travel within the country to raise the interest of hams and the general public. Understandably, alot of Chileans are somewhat skeptical of the concept of a Chilean radio amateur satellite. The money raised, so far, is mainly based on personal contrib-utions by members of AMSAT-CE. The organization has only one paid em-ployee, a part time secretary. Everyone else in the team are volunteers, all of them licensed hams. With this information in mind, AMSAT-CE can be considered to be in the best tradition of other AMSAT-OSCAR projects in various countries. Once more, they are trying to accomplish a difficult task in the environment of a country that is making efforts to shed the image of a "underdeveloped" nation.

CESAR-1 will be a typical MICROSAT to which the builders expect to add a GPS receiver and digital voice transponder experiments. The latter will receive an L-Band uplink and transmit an S-Band downlink. Among other applications, this experiment will allow terrestrial repeaters to be linked via the satellite. The present plan calls for completion of a flight unit by January '96

[The AMSAT News Service (ANS) would like to thank Eduardo Diaz (CE3GA) for this bulletin item.]

/EX
SB SAT @ AMSAT $ANS-248.02
ITAMSAT TELEMETRY COEFFICIENTS

HR AMSAT NEWS SERVICE BULLETIN 248.02 FROM AMSAT HQ
SILVER SPRING, MD SEPTEMBER 4, 1993
TO ALL RADIO AMATEURS BT
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ITAMSAT Telemetry Coefficient

Following is a coefficient file for the telemetry channels of ITAMSAT. Alberto (I2KBD) reports the launch is presently scheduled for 25-SEP-1993 at 01:27 UTC. ITAMSAT will start out with a callsign of ITAMSAT, and change to IY2SAT when BBS operations are initiated. Writers of telemetry decoders will want to note that this file may not be precisely in the "standard" MICROSAT format and their programs will need to recognize both callsigns.

This file has been uploaded to CI$, hamnet, library 5.

WD0E will attempt to have an updated TLMDCII out prior to this launch, that will recognize this bird, but that may not be possible given other commitments.

Martha, at AMSAT HQ, will have this file available both as hard copy and on disk in about a week or so. Telemetry aficionados will note some interesting items here:

- ch 15h is labeled RX frame temp. This is the same as on the current MICROSATs: the temp of the frame, in the receiver module, on the inside wall on the +X side.

There are temperature sensors on all four side solar panels and the -Z, not just the +Y. This is primarily to improve the source-side power management efficiency.

- Channels 2C through 2E will require clarification, but they may be simply different labels for the same channel numbers is the present MICROSATs, as the BCR is essentially identical.

- Note the -Z array temp at ch 35h

- Channels 3E through 41 will require clarification

- WD0E understand the IR sensor will have a narrower field of view than the present MICROSATs. Observing its varations when the +Z surface is earth pointing may be interesting.

0	Rx D DISC:	+7.89403	-0.07355	0.000	kHz
1	Rx D S meter:	+0.000	+1.000	0.000	Counts
2	Rx C DISC:	+8.70383	-0.07941	0.000	kHz
3	Rx C S meter:	+0.000	+1.000	0.000	Counts
4	Rx B DISC:	+9.24064	-0.08231	0.000	kHz
5	Rx B S meter:	+0.000	+1.000	0.000	Counts
6	Rx A DISC:	+9.78829	-0.08761	0.000	kHz
7	Rx A S meter:	+0.000	+1.000	0.000	Counts
8	Rx E DISC:	+9.47641	-0.08615	0.000	kHz
9	Rx E S meter:	+0.000	+1.000	0.000	Counts
A	+5V (Rx) Bus:	+0.000	+0.03235	0.000	Volt
B	+5V Rx Current:	+0.000	+0.000250	0.000	Ampere
C	+2.5V VREF:	+0.000	+0.01128	0.000	Volt
D	8.5V (Rx) Bus:	+0.000	+0.04497	0.000	Volt
E	+Z IR Detector:	+0.000	+1.000	0.000	Counts
F	LO Monitor I:	+0.000	+0.000037	0.000	Ampere
10	+10V (Rx) Bus:	+0.000	+0.053557	0.000	Volt
11	GASFET Bias I:	+0.000	+0.000026	0.000	Ampere
12	Ground REF:	+0.000	+0.010000	0.000	Volt
13	+Z Array V:	+0.000	+0.10381	0.000	Volt
14	Rx Temp:	+95.246	-0.62071	0.000	Degree
15	+X Frame Temp:	+95.246	-0.62071	0.000	Degree
16	Bat 1 V:	+1.8013	-0.00364	0.000	Volt
17	Bat 2 V:	+1.8013	-0.00364	0.000	Volt
18	Bat 3 V:	+1.8013	-0.00364	0.000	Volt

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19    Bat 4 V:       +1.8013      -0.00364     0.000       Volt
1A    Bat 5 V:       +1.8013      -0.00364     0.000       Volt
1B    Bat 6 V:       +1.8013      -0.00364     0.000       Volt
1C    Bat 7 V:       +1.8013      -0.00364     0.000       Volt
1D    Bat 8 V:       +1.8013      -0.00364     0.000       Volt
1E    Array V:       +8.5018      +0.068273    0.000       Volt
1F    +5V Bus:       +0.958       +0.0312      0.000       Volt
20    +8.5V Bus:     +6.862       +0.0184      0.000       Volt
21    +10V Bus:      +8.1206      +0.022503    0.000       Volt
22    BCR Set Point: +4.0019      +1.1133      0.000       Set
23    +10V Bus Cur:  +0.014641    +0.0043106   0.000       Ampere
24    +8.5V Bus Cur: +0.00234     +0.0007203   0.000       Ampere
25    +5V Bus Cur:   -0.015       +0.0041667   0.000       Ampere
26    +X Array Cur:  -0.008039    +0.0023219   0.000       Ampere
27    -X Array Cur:  -0.008039    +0.0023219   0.000       Ampere
28    -Y Array Cur:  -0.008039    +0.0023219   0.000       Ampere
29    +Y Array Cur:  -0.008039    +0.0023219   0.000       Ampere
2A    -Z Array Cur:  -0.008039    +0.0023219   0.000       Ampere
2B    +Z Array Cur:  -0.008039    +0.0023219   0.000       Ampere
2C    Trickle Cur:   -0.008039    +0.0023219   0.000       Ampere
2D    BCR Input Cur: -0.02593     +0.00339     0.000       Ampere
2E    Bat Output Cur:-0.04936     +0.00418     0.000       Ampere
2F    Bat 1 Temp:    +95.246      -0.62071     0.000       Degree
30    Bat 2 Temp:    +95.246      -0.62071     0.000       Degree
31    Baseplt Temp:  +95.246      -0.62071     0.000       Degree
32    PSK TX RF Out: +0.007442    -0.0002794   0.000060    Watt
33    FM/PSK RF Out: +0.011771    +0.0025386   0.000054    Watt
34    PSK TX PA Temp:+95.246      -0.62071     0.000       Degree
35    -Z Array Temp: +95.246      -0.62071     0.000       Degree
36    FM/PSK PA Temp:+95.246      -0.62071     0.000       Degree
37    -Z Ext Temp:   +95.246      -0.62071     0.000       Degree
38    +Z Array Temp: +95.246      -0.62071     0.000       Degree
39    -Y Frame Temp: +95.246      -0.62071     0.000       Degree
3A    +X Array Temp: +95.246      -0.62071     0.000       Degree
3B    +Y Array Temp: +95.246      -0.62071     0.000       Degree
3C    -X Array Temp: +95.246      -0.62071     0.000       Degree
3D    -Y Array Temp: +95.246      -0.62071     0.000       Degree
3E    Earth sensor:  +0.000       +1.000       0.000       Counts
3F    Bat 3 Temp:    +95.246      -0.62071     0.000       Degree
40    Separation sw: +0.000       +0.05        0.000       Volt
41    Spin sensor:   +0.000       +1.000       0.000       Counts
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[The AMSAT News Service would like to thank Alberto Zagni (I2KBD) and Jim White (WD0E) for making this data availble for this ANS bulletin.]

/EX
SB SAT @ AMSAT $ANS-248.03
AMSAT OPS NET SCHEDULE

HR AMSAT NEWS SERVICE BULLETIN 248.03 FROM AMSAT HQ
SILVER SPRING, MD SEPTEMBER 4, 1993
TO ALL RADIO AMATEURS BT
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Current AMSAT Operations Net Schedule For AO-13

AMSAT Operations Nets are planned for the following times. Mode-B Nets are conducted on AO-13 on a downlink frequency of 145.950 MHz. If, at the start of the OPS Net the frequency of 145.950 MHz is being used for a QSO, OPS Net enthusiasts are asked to move to the alternate frequency of 145.955 MHz

Date	UTC	Mode	Phs	NCS	Alt NCS

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11-Sep-93       1430   B       159      VE2LVC  W9ODI
18-Sep-93       1515   B        96      N7NQM   W5IU
 2-Oct-93       1400   B       160      WA5ZIB  WJ9F
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Any stations with information on current events would be most welcomed. Also, those interested in discussing technical issues or who have questions about any particular aspect of OSCAR statellite operations are encouraged to join the OPS Nets. In the unlikely event that either the Net Control Station (NCS) or the alternate do not call on frequency, any participant is invited to act as the NCS.

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Slow Scan Television on AO-13

SSTV sessions will be held on immediately after the OPS Nets a downlink on a Mode-B downlink frequency 145.960 MHz.

/EX
SB SAT @ AMSAT $ANS-248.04
WEEKLY OSCAR STATUS REPORTS

HR AMSAT NEWS SERVICE BULLETIN 248.04 FROM AMSAT HQ
SILVER SPRING, MD SEPTEMBER 4, 1993
TO ALL RADIO AMATEURS BT
BID: $ANS-248.04

Weekly OSCAR Status Reports: 04-SEP-93

AO-13: Current Transponder Operating Schedule:

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L QST *** AO-13 TRANSPONDER SCHEDULE ***  1993 Aug 16-Oct 25
Mode-B  : MA   0 to MA  60 !
Mode-BS : MA  60 to MA 120 !<- after Aug 30 (hopefully)
Mode-S  : MA 120 to MA 145 !<- S transponder; B trsp. is OFF
Mode-S  : MA 145 to MA 150 !<- S beacon only
Mode-BS : MA 150 to MA 180 !        Alon/Alat 180/0
Mode-B  : MA 180 to MA 256 !
Omnis   : MA 230 to MA  40 !  Move to attitude 210/0, 25-Oct-93
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Continuous up-to-date information about AO-13 operations is always available on the beacons at 145.812 MHz and 2400.646 MHz in CW, RTTY and 400 bps PSK. Also, these bulletins are also posted to INTERNET, ANS bulletins, Packet, PACSATs, etc., and can also be found in many international newsletters. [G3RUH/DB2OS/VK5AGR]

AO-13 DX: LU8EBH says that he will be Asuncion, Paraguay from 11-SEP-93 until 15-SEP-93 operating AO-13 AMSAT-OSCAR-13 Mode-B using the call sign ZP0SAT or LU8EBH/ZP. Look for him on a downlink frecuency of 145.890 or 145.900 MHz. In early September he'll confirm the dates and callsign. On 30-AUG-93 at 13:58 UTC there took place the first QSO between Japan and countries in Zone 13 using AO-13 satellite. JG1TSG moved to Nosap Cape NE Japan for this purpose. Also active was JA8BY. Theye used the Mode-B. JG1TSG used 50 watts output, and his antennas consisted of a 12 element boom for 145 MHz and 26 elements for 435 MHz. LU8EBH used home brew rig with 25 watts output. His antennas were the KLM 40CX and 22C. Some minutes later, with about one or two degrees of elevation, the signals increased to S5-2. [LW2DTZ & LU8EBH]

AO-10: VE2LEZ reports that last weekend he was listening to AO-10 when he came upon an excellent DX station: 4MZMW0. And it turns out that this was VE2LEZ first contact on AO-13! He says that he made a contact with 4MZMW0 on a downlink frequency of 144.915 MHz. VE2LEZ says that the contact was difficult but challenging. [VE2LEZ @ VE2FKB]

AO-16: Operating normally. [WH6I]

UO-22: Operating normally. [WH6I]

KO-23: Operating normally. [WH6I]

AO-21: RUDAK-2 is now operating continously in the digital FM Mode only, no telemetry and no DigiVoice for the moment. So nothing is wrong with RUDAK. However, telemetry and DigiVoice will resume later this month and for October, a special DigiVoice Experiment will be held. [DB2OS]

The AMSAT NEWS Service (ANS) is looking for volunteers to contribute weekly OSCAR status reports. If you have a favorite OSCAR which you work on a regular basis and would like to contribute to this bulletin, please send your observations to WD0HHU at his CompuServe address of 70524,2272, on INTERNET at wd0hhu@amsat.org, or to his local packet BBS in the Denver, CO area, WD0HHU @ W0LJF.#NECO.CO.USA.NOAM. Also, if you find that the current set of orbital elements are not generating the correct AOS/LOS times at your QTH, PLEASE INCLUDE THAT INFORMATION AS WELL. The information you provide will be of value to all OSCAR enthusiasts.

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